Manufacturing Processes

Cast parts will not typically have a Breaking Strength Rating, regardless of the material, due to the possibility of air pockets being trapped and not visible under the skin of the part. Types of casting include investment, sand and die casting. Investment casting by the "lost wax" method is used to make stainless steel parts. Sand casting is used to make gray iron, aluminum and manganese bronze items. Die casting is used to make manganese bronze and zinc based alloy fittings.

Stamped parts offer a reliable low cost alternative to cast stainless steel and brass parts. They are processed with tooling that simulates a "cookie cutter" on sheet or coil ck, and then usually formed to shape with bending dies.

Extruded brass parts are made by forcing heated material through a die which has the shape of the desired cross section. Many of these parts are then machined with additional details such as holes and slots, etc.

Machined parts made from stainless steel and brass are cut from a solid piece of material on mills and lathes. They offer excellent durability in non-critical applications.

Drop Forged steel and bronze parts generally offer the greatest tensile strength and best resistance to shocks and distortion. They are hot-formed in accurately cut dies, resulting in parts which are dimensionally very consistent. Some parts intended for lighter duty are made by forming and bending under pressure but without heat.

Injection Molded plastic pellets are drawn into the screw (auger) and heated to the proper melting point by heat bands surrounding the screw. The melted plastic is then injected into precision molds to form the parts. After molding, trimming off of the runner is done before assembly or sale.